

OBSERVE & REPORT PLANTS AND/OR ANIMALS



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PUBLICATION NOTES

BHP Billiton Iron Ore is proud to support Greening Australia to provide valuable conservation and land management training to communities throughout the Pilbara through the Indigenous Training Program.

This Learning Guide series has been developed as part of our partnership of the program.

Gavin Price, Head of Environment, BHP Billiton Iron Ore

Greening Australia is proud to produce and provide the comprehensive suite of new ALEP Learning Guides. The guides are compatible with the new horticulture and conservation industries training package and suited to developing skills in Indigenous communities within remote areas of the country where employment opportunities are limited. We would like to thank BHPBIO for their generous support in the development of the guides.

Brendan Foran, National CEO Greening Australia

The second series of ALEP Guides is aligned with a number of units of competence from the *Training Package AHC10 – Agriculture, Horticulture and Conservation and Land Management* (Release 8.0). The units selected are frequently used within Certificates I to III in Horticulture and Conservation and Land Management. As such they cover, where possible, the elements, performance criteria and required skills and knowledge of each unit.

The principal goal of these resources is to support the learning process; the learning activities may complement a trainer's assessment plan. The intent is that they will be used in an interactive manner with learners rather than as self-paced study guides. The structure and sequence have been designed to follow the logical steps of the practical tasks wherever possible. Concepts are introduced and then consolidated with discussion and/or practical activities.

The writers consider that these guides can provide a sound technical foundation but also strongly encourage trainers to complement the guides with additional, authentic resources from relevant industry texts and websites. The guides can be used in part or in their entirety but should always be linked to practical activities to strengthen the teaching and learning.

Genuine consideration was given to the level of language used in the guides. The goal has been to find a balance between simplifying the language to an accessible level and ensuring that the vocational concepts are addressed. The writers contend that with appropriate support these texts can provide an opportunity for students to strengthen their language, literacy and numeracy skills, which may be required for pathway progression.

A number of Aboriginal people have been involved in developing this ALEP Guide, which is considered suitable for use within a program based on Aboriginal pedagogies.

INTRODUCTION

Welcome to *Observe and report plants and/or animals*. In this unit you will observe, record and report on the presence of plants and/or animals in your region. This will include those that are threatened, notifiable or not often seen in your region.

This learner guide will provide a structure for learning how to conduct a survey, record data and report information. The species you observe will vary between regions, and the procedures you follow will vary between workplaces. It is necessary that the learning for this unit is also done practically in the workplace.

It is recommended that learners study the units *Recognise plants* and *Recognise fauna* before starting this unit, as they provide strong foundations for the content of this unit. There are ALEP Guides for both of these units. This guide assumes the learner has developed a basic understanding of classification and scientific naming conventions.

EQUIPMENT REQUIRED

To complete this training you will need the following:

1. Appropriate Personal Protective Equipment (PPE)
2. A range of plant and animal references, including texts and experts
3. Access to the internet for research (preferred, but not essential)
4. Equipment needed for chosen survey method

LEARNING ACTIVITIES

There are four kinds of activities to complete. These activities may go toward your final assessment.

SECTION	ACTIVITY	SATISFACTORY (Y/N)	DATE
RESEARCH ACTIVITIES			
2.2	Assessing importance of species		
2.6	Fauna in the local area		
DISCUSSION ACTIVITIES			
1.1	Hazards in survey work		
1.3	Standard Operating Procedures		
1.4	Reasons for conducting a survey		
3.1	Interpret data		
3.3	Effective reports		
WORKBOOK ACTIVITIES			
2.3	Botanical terms		
2.3	Plant genera		
3.2	Using a grid reference on a map		
PROJECTS			
1.9	Plan a survey		
2.5	Participate in a plant survey		
2.8	Participate in a fauna survey		
3.3	Report on a plant or fauna survey		



1

GET READY

REMEMBER

A **HAZARD** is anything that can cause injury to or damage the health of a person or animal. **RISK** is the chance of a hazard causing injury.

The most common way to observe and report on plants and animals in a workplace is by doing a survey.

1.1 WORKPLACE HEALTH & SAFETY

With every job, you and your work team need to think about the hazards involved and ways to minimise the risk of harm. The things you wear (PPE) and the things you do to minimise risk are called **controls**.

There may be hazards specific to survey work, depending on the kind of survey you are doing.

HAZARDS	CONTROLS
Irritation or allergies from plants	<ul style="list-style-type: none">• Learn about any poisonous plants or plants that could trigger allergies• Wear gloves, safety glasses, long sleeves, trousers and safety boots
Animal scratches or bites causing injury and/or infection	<ul style="list-style-type: none">• Learn how to safely handle animals• Disinfect hands after handling animals or scats• Pay special attention to where you are walking• Have a well-stocked first aid kit, including dressings and disinfectant
Trips, slips and falls	<ul style="list-style-type: none">• Pay special attention to where you are walking, because your attention is often on other things such as looking upwards
Pointy plant material	<ul style="list-style-type: none">• Wear safety glasses• Be aware when you are walking, bending down, turning

Many of the other hazards with survey work will be the same as other jobs where you:

- Work outside
- Travel away from your base
- Travel in remote areas



DISCUSSION ACTIVITY

What are the hazards you need to think about if you are planning to drive away from base to do a survey? What controls can you apply to minimise the risk of harm?



HAZARDS

CONTROLS

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1.2 LEGISLATION

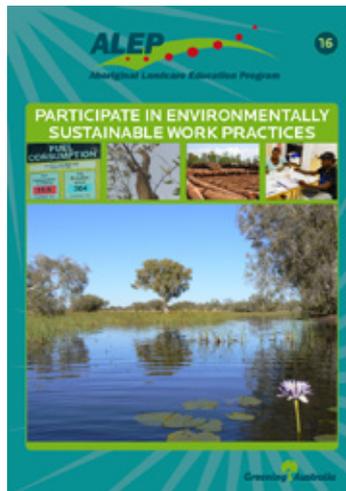
When doing a survey you will be working under several state or national laws. The legislation you need to follow depends on where you are living and the kind of survey you are doing. Below are the previous ALEP Guides that include sections about each relevant area of the law. It will be useful for you to revise the sections in these guides.

Participate in OHS processes



WHS legislation

Participate in environmentally sustainable work practices



Sustainability legislation

Recognise fauna



Legislation

PERMITS & ETHICS APPLICATIONS

In some states and territories, collecting any specimens of native plants or animals requires a permit. You always need to get a permit for survey work where you will take specimens of protected species.

The ethics approval will detail:

- Why you are doing the survey
- How you will do the survey
- Who is involved in the survey

Your supervisor or partner organisation will usually take care of getting the required permits. You need to know if you are working with a permit and if there are any restrictions.

CULTURAL PERMISSION

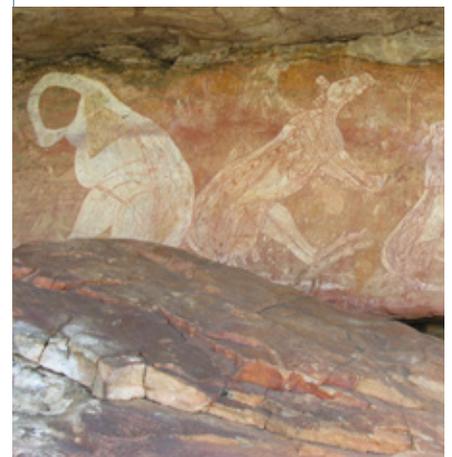
It is very important to check if approval is needed from the Aboriginal owners of the site you are visiting. Some sites should not be visited by men, others not by women, or not at particular times of year. Sometimes you will need to take the custodian of that place with you on your trip.

In some Aboriginal cultures, taking parts of certain plants or sharing certain knowledge is forbidden. To show respect, always listen to and follow the instructions given by the custodian about what you are allowed to do.

The chairperson of the local community council can tell you who you need to speak with about a particular area.

NOTE

In some states and territories, your workplace may need to get a permit or ethics approval to trap any mammal.





1.3 WORKPLACE PROCEDURES

Workplace procedures are written to help you and your work team follow the law, protect the area you are working in and make sure you work safely.

Your work team should also help your supervisor to do the Job Safety Analysis (JSA) before you start.



DISCUSSION ACTIVITY

Does your workplace or partner organisation have a Standard Operating Procedure (SOP) for doing plant or fauna surveys?

If yes, read through the SOP as a group.

If not, work with your trainer and supervisor to develop a SOP that you can use in the future. You may be able to get a sample one from your state department of parks and wildlife or equivalent.

See the *References* section for examples: Brocklehurst et al. (2007), Clarke (2009)

NOTE

Data from the first survey done in a particular area is called baseline data. It tells us current conditions and numbers of species.

Results from future surveys can be compared with baseline data. This gives information about changes resulting from fire, development, pollution, etc.

1.4 PURPOSE OF SURVEY – WHY

There are many reasons why your workplace might organise a survey. You might do routine surveys of the region as part of your everyday operations for the following reasons:

- Employee familiarisation with the region’s species
- Monitor biodiversity
- Monitor pest species
- Monitor regeneration (e.g. after a fire or as part of a project)
- Monitor vulnerable, threatened species
- Gather baseline data
- Ethnobiological research (e.g. looking at bush tucker species)

Or it might be a project for an outside organisation that is interested in:

- Scientific and/or higher education research
- Proposed development of the region
- Mapping
- Development of reference guides
- Ground truthing (checking findings from satellite and aerial images)



DISCUSSION ACTIVITY

What are some of the reasons your workplace has been involved in survey work in the past?



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1.5 EXISTING INFORMATION

It can be helpful to find any relevant existing information before doing the survey.

You can find out if there have been previous plant and/or animal surveys done in the region by:

- Searching the internet
- Contacting your regional parks and wildlife services
- Contacting other organisations active in your area, e.g. World Wildlife Fund, CSIRO, Greening Australia, NRM groups

It is also useful to ask people who have knowledge about the region, e.g. Aboriginal elders, community rangers, special interest and other community groups, such as bird watchers and bush walkers.



1.6 LOCATION – WHERE

If the purpose of your survey is to monitor and document a particular area, then you will already know your location. However, if you are looking for something specific, such as a threatened species, then you need to know where this species lives so you can find it. To work out the location, you need to think about the following things.

PLANTS

- What is its habitat? e.g. woodland, escarpment, watercourse, spinifex plains, coastal, mangroves, etc. (see ALEP Guide *Recognise plants* for general information about habitat)
- Soil and rock types, e.g. clay, sand, dolerite, granite
- Plant associations – what other plants does it generally grow around?

ANIMALS

- What is its preferred habitat?
- What are its food sources? Where are they found?
- Migration/residency patterns – where can it be found at this time of year?

If you don't know this information, then you might need to do some research to find out.

- Speak with the groups mentioned above
- Use reference books
- Refer to previous survey reports

